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EXAMINER	
MOORE, IAN N	

ART UNIT	PAPER NUMBER
2661	4

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/773,073	GIACOPELLI ET AL.	
	Examiner	Art Unit	
	Ian N Moore	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,2,6-8,12-14 and 18-20 is/are rejected.

7)☒ Claim(s) 3-5,9-11 and 15-17 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 2 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robrock (U.S. 5,539,884) in view of Graham (U.S. 6,097,722).

Regarding claims 1 and 20, Robrock'884 discloses a method for managing bandwidth in a packet data network (**see FIG. 2A, a fast-packet switch network comprises fast-packet switch 51 and other fast packet switches**) in response to subscriber defined polices, said network including a service manager (**see FIG. 2A, a combined system of Connection Management Software 30, Connection Management Processor 64, BIN SCP 285, Billing Data 65, RAO 67, and Call Processing Software 31**) of a network service provider (**see FIG. 2A, a fast-packet switching public network provider; see col. 16, lines 5-6**), a plurality of access hubs (**see FIG. 2A, each CPE/PBX 52 that couples to each ports 56 at Fast Packet Switch 51; see col. 15, lines 55-58**), and an access network (**see FIG. 2A, a network between each CPE/PBX 52 and fast-packet switches 51**), said service manager including a policy server entity (**see FIG. 2B, a combined system** of **Connection Management Software 30, Connection Management Processor 64, BIN SCP 285),** a call processing entity (**see FIG. 2A, Call processing software 31**), a bandwidth management processing entity (**see FIG. 2A, a combined system** of **Connection Management Software**

30, Connection Management Processor 64, BIN SCP 285) and a data store (**see FIG. 2A, the combined system of Billing Data 65, RAO 67, and BIN SCP Disks 286, 288 of FIG. 6D)**, said method comprising the steps of:

storing in the data store bandwidth management policies (**see col. 10, lines 29-45; note that bandwidth, billing and authentication procedures/policies must be stored in order to perform signaling**) as defined by a subscriber for the plurality of access hubs and the line numbers assigned to that subscriber (**see FIG. 7A, steps 222, 226, 228, 229, and 230; see col. 12, lines 34-52, 57-66; note that by determining the authentication and billing of each connection request, it is clear that the combined system of storage/billing must store the bandwidth/billing/authentication policies/procedures defined/provided by each calling/called customer/subscriber for each CPE/PBX, and the called/calling number/address assigned to each calling/called customer/subscriber**);

communicating said policies to the policy server entity in the service manager of the network service provider (**see FIG. 7A, steps 232; see col. 10, lines 1-20; see col. 12, lines 52-56; note that BIN SCP 285 and connection Management processor 64 of the network service provider communicates each other regarding the bandwidth/billing/authentication policies/procedures before establishing the connection request).**

performing policy processing in the bandwidth management processing entity of the service manager (**see col. 7, lines 60-66; see col. 8, lines 34-43; col. 9, lines 19-24; note that the connection management processor contains the connection table which performs the**

bandwidth/connection management by establishing ATM VP/VC according to the payload/service type of the request).

Robrock'884 does not explicitly disclose in response to a request for modification of the maximum bandwidth parameter in the communicated policy for one access hub of the subscriber, determining in the call processing entity in the service manager a current bandwidth utilization at the one access hub and whether the current bandwidth utilization exceeds a maximum bandwidth defined by the subscriber and stored in the data store; and if such determination indicates that the requested bandwidth utilization exceeds the maximum bandwidth defined by the subscriber and stored in the data store.

However, the above-mentioned claimed limitations are taught by Graham'722. In particular, Graham'722 teaches a packet data network (**see FIG. 1B, ATM network 120**) including a service manager of a network provider (**see FIG. 1B, Centralized Control Module 16 of the ATM network provider**), an access network (**see FIG. 1B, Customer Networks 110**), said service manager including a policy server entity (**see FIG. 1B, Centralized Call Admission Control Usage Monitor 145**), a call processing entity (**see FIG. 1B, Call Control 140**), a bandwidth management processing entity (**see FIG. 1B, the combined system of Centralized call admission control/usage monitor and Bandwidth Manager 150**) and a data store (**see FIG. 1B, Bandwidth Manager 150**), and the method comprising:

storing in the data store bandwidth management policies as defined by a subscriber (**see FIG. 2, the combined system of Centralized call admission control/usage monitor**

145 and Bandwidth Manager 150 stores the bandwidth management policies/contracts as defined/contracted by the client; see col. 7, lines 29-40);

communicating said policies to the policy server entity in the service manager of the network service provider (**see FIG. 2, bandwidth management policies/contracts are communicated between Centralized call admission control/usage monitor 145 and Bandwidth Manager 150; see col. 7, lines 29-40);**

in response to a request for modification of the maximum bandwidth parameter in the communicated policy for one access hub of the subscriber (**see FIG. 8, a request; note that VPN client requests/negotiates the additional allocation of bandwidth from the control module 145 by modifying/adding of the maximum/contracted bandwidth in the policy/contract; see col. 7, lines 53-60**),

determining in the call processing entity in the service manager a current bandwidth utilization at the one access hub and whether the current bandwidth utilization exceeds a maximum bandwidth defined by the subscriber and stored in the data store (**see FIG. 8, CAC checks client's current total bandwidth utilizing, and determines whether the current total bandwidth is complaint/exceed a maximum/contracted bandwidth defined by the client and the stored contracted data with respective to a client; see col. 7, lines 55-65**); and

if such determination indicates that the requested bandwidth utilization exceeds the maximum bandwidth defined by the subscriber and stored in the data store (**see FIG. 8, CAC determines that the additionally requested bandwidth is <u>not</u> compliant (i.e. compliant? NO) with the contract (i.e. exceeds the maximum bandwidth allotted) for that**

particular client and the stored contracted data with respective to a client; see col. 7, lines 55-65);

performing policy processing in the bandwidth management processing entity of the service manager (**see FIG. 8, CAC performs the policy/contract processing by either rejection the additional bandwidth request when the system is overload (i.e. overload? YES), or accepted by borrowing the additional bandwidth as over-reserved bandwidth (i.e. overload? No); see col. 7, lines 65 to col. 8, lines 5**).

In view of this, having the system of Robrock'884 and then given the teaching of Graham'722, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Robrock'884, for the purpose of providing the CAC bandwidth management and control mechanism to allocate the extra bandwidth request, as taught by Graham'722, since Graham'722 states the advantages/benefits at col. 4, line 1-45 that such modification would enable a multitude of clients to "lease/borrow" additional capacity/bandwidth as needed basics in addition to contracted/maximum bandwidth while ensuring exiting capacity to be used to the fullest extent possible. The motivation being that by utilizing ATM CAC mechanism of borrowing the extra bandwidth, it can increase the flexibility of the bandwidth allocation processed while satisfying the customer needs since the client can now utilize the extra/spare/unused bandwidth.

Regarding claim 2, Robrock'884 discloses communicating the defined policies from a data communications terminal (**see col. 3, lines 25-34; the system administrator of the OSS system**) to a configuration and provisioning entity (**i.e. configuration and provisioning OSS systems; note that it is well known in the art that upon request from**

the customer/subscriber, the system administrator communicates the defined/provisioned policies/contract from the administrator computer terminal that couples to the OSS systems);

and communicating the defined policies from the configuration and provisioning entity to the policy server entity of the service manager **(see FIG. 6D, note that configuration and provisioning OSS systems communicates the defined/provisioned policies/contract from the OSS systems to BIN SCP 292; see col. 11, lines 64-67).**

2. Claim 6-8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robrock'884 and Graham'722, further in view of well established teaching in art.

Regarding claim 6, Robrock'884 discloses a method for managing bandwidth in a packet data network **(see FIG. 2A, a fast-packet switch network comprises fast-packet switch 51 and other fast packet switches)** in response to subscriber defined polices, said network including a service manager **(see FIG. 2A, a combined system of Connection Management Software 30, Connection Management Processor 64, BIN SCP 285, Billing Data 65, RAO 67, and Call Processing Software 31)** of a network service provider **(see FIG. 2A, a fast-packet switching public network provider; see col. 16, lines 5-6)**, a plurality of access hubs **(see FIG. 2A, each CPE/PBX 52 that couples to each ports 56 at Fast Packet Switch 51; see col. 15, lines 55-58)**, and an access network **(see FIG. 2A, a network between each CPE/PBX 52 and fast-packet switches 51)**, said service manager including a policy server entity **(see FIG. 2B, a combined system** of **Connection Management Software 30, Connection Management Processor 64, BIN SCP 285),** a call

processing entity (**see FIG. 2A, Call processing software 31**), a bandwidth management processing entity (**see FIG. 2A, a combined system** of **Connection Management Software 30, Connection Management Processor 64, BIN SCP 285**) and a data store (**see FIG. 2A, the combined system of Billing Data 65, RAO 67, and BIN SCP Disks 286, 288 of FIG. 6D**), said method comprising the steps of:

storing in the data store bandwidth management policies (**see col. 10, lines 29-45; note that bandwidth, billing and authentication procedures/policies must be stored in order to perform signaling**) as defined by a subscriber for the plurality of access hubs and the line numbers assigned to that subscriber (**see FIG. 7A, steps 222, 226, 228, 229, and 230; see col. 12, lines 34-52, 57-66; note that by determining the authentication and billing of each connection request, it is clear that the combined system of storage/billing must store the bandwidth/billing/authentication policies/procedures defined/provided by each calling/called customer/subscriber for each CPE/PBX, and the called/calling number/address assigned to each calling/called customer/subscriber**);

identifying a call attempt at one access hub (**see col. 12, lines 15-19; see FIG. 7A, step 212; see FIG. 5A; note that upon identifying/detection a call/connection attempt/request at the CPE/PBX 52 and the fast-packet switch 51, a signaling cell for attempting/requesting a call/connection is identified/received by the SCP**);

performing policy processing in the bandwidth management processing entity of the service manager (**see col. 7, lines 60-66; see col. 8, lines 34-43; col. 9, lines 19-24; note that the connection management processor contains the connection table which performs the**

bandwidth/connection management by establishing ATM VP/VC according to the payload/service type of the request).

Robrock'884 does not explicitly disclose determining, in the call processing entity, a bandwidth utilization required to support the new session at the one access hub and whether the required bandwidth utilization exceeds a maximum bandwidth defined by the subscriber and stored in the data store of the service manager; and if such determination indicates that the required bandwidth exceeds the maximum bandwidth defined by the subscriber and stored in the data store.

However, the above-mentioned claimed limitations are taught by Graham'722. In particular, Graham'722 teaches a packet data network (**see FIG. 1B, ATM network 120**) including a service manager of a network provider (**see FIG. 1B, Centralized Control Module 16 of the ATM network provider**), an access network (**see FIG. 1B, Customer Networks 110**), said service manager including a policy server entity (**see FIG. 1B, Centralized Call Admission Control Usage Monitor 145**), a call processing entity (**see FIG. 1B, Call Control 140**), a bandwidth management processing entity (**see FIG. 1B, the combined system of Centralized call admission control/usage monitor and Bandwidth Manager 150**) and a data store (**see FIG. 1B, Bandwidth Manager 150**), and the method comprising:

storing in the data store bandwidth management policies as defined by a subscriber (**see FIG. 2, the combined system of Centralized call admission control/usage monitor 145 and Bandwidth Manager 150 stores the bandwidth management policies/contracts as defined/contracted by the client; see col. 7, lines 29-40**);

identifying a call attempt at one access hub (**see FIG. 8, a request; note that upon identifying/detection a call/connection attempt/request from the client A at Customer network 110I and ATM switch, VPN client request attempting/requesting a connection is identified/received by the CAC; see col. 7, lines 53-60),**

if policy-based bandwidth management is supported by the subscriber, retrieving bandwidth management policies associated with the subscriber and the service provider from the data store in the service manager (**see FIG. 4A-4D; see col. 7, lines 53-60, see col. 9, lines 45 to col. 10, lines 67; note that in order to communicate and utilizes ATM, the client must support contract/policy-base bandwidth management. As indicated in Table 1-2, in order to set-up/negotiate a new connection for a particular client, the contract/policies associated with each client must be retrieved from the stored the stored contracted data from the bandwidth manager);**

determining, in the call processing entity, a bandwidth utilization required to support the new session at the one access hub and whether the required bandwidth utilization exceeds a maximum bandwidth defined by the subscriber and stored in the data store of the service manager (**see FIG. 8, CAC checks client's total bandwidth utilizing, and determines whether the total bandwidth is complaint/exceed a maximum/contracted bandwidth defined by the client and the stored contracted data with respective to a client; see col. 7, lines 55-65**); and

if such determination indicates that the requested bandwidth utilization exceeds the maximum bandwidth defined by the subscriber and stored in the data store (**see FIG. 8, CAC determines that the additionally requested bandwidth is <u>not</u> compliant (i.e. compliant?**

NO) with the contract (i.e. exceeds the maximum bandwidth allotted) for that particular client and the stored contracted data with respective to a client; see col. 7, lines 55-65);

performing policy processing in the bandwidth management processing entity of the service manager (**see FIG. 8, CAC performs the policy/contract processing by either rejection the additional bandwidth request when the system is overload (i.e. overload? YES), or accepted by borrowing the additional bandwidth as over-reserved bandwidth (i.e. overload? No); see col. 7, lines 65 to col. 8, lines 5**).

In view of this, having the system of Robrock'884 and then given the teaching of Graham'722, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Robrock'884, for the purpose of providing the CAC bandwidth management and control mechanism to allocate the extra bandwidth request, as taught by Graham'722, since Graham'722 states the advantages/benefits at col. 4, line 1-45 that such modification would enable a multitude of clients to "lease/borrow" additional capacity/bandwidth as needed basics in addition to contracted/maximum bandwidth while ensuring exiting capacity to be used to the fullest extent possible. The motivation being that by utilizing ATM CAC mechanism of borrowing the extra bandwidth, it can increase the flexibility of the bandwidth allocation processed while satisfying the customer needs since the client can now utilize the extra/spare/unused bandwidth.

Neither Robrock'884 nor Graham'722 explicitly discloses determining whether policy-based bandwidth management is supported for the subscriber (**per well established teaching in art, in order perform policy/contract-base bandwidth management, one skill**

in ordinary art must determine/verify whether the policy/contract-base bandwidth management is supported by the customer, and the customer must be ready to accept/support the policy/contract before establishing the connection).

However, the above-mentioned claimed limitations are taught by well-established teaching in art. In view of this, having the combined system of Robrock'884 and Graham'722, then given the teaching of well established teaching in art, it would have been obvious to one having ordinary skill in the art the time the invention was made to modify the combined system of Robrock'884 and Graham'722, for the purpose of determining whether the customer supports the policy/contract-base management before establishing the connection, as taught by well established teaching in art. The motivation being that by verifying and determining whether the customer supports a contract/policy-based bandwidth management prior to establishing the connection, it can reduce the incompatibilities between two systems, and it can increase the customer satisfaction since the validation is performed before the providing the service to the customer.

Regarding claims 7 and 8, Robrock'884 discloses wherein the call attempt is a call origination from the subscriber (**see FIG. 2B, Calling Party that couples to CPE/PBX 52**) and to the subscriber (**see FIG. 2B, Called Party that couples to CPE/PBX 54**).

Regarding claim 12, Robrock'884 discloses a method for managing bandwidth in a packet data network (**see FIG. 2A, a fast-packet switch network comprises fast-packet switch 51 and other fast packet switches**) in response to subscriber defined polices, said

network including a service manager (**see FIG. 2A, a combined system of Connection Management Software 30, Connection Management Processor 64, BIN SCP 285, Billing Data 65, RAO 67, and Call Processing Software 31**) of a network service provider (**see FIG. 2A, a fast-packet switching public network provider; see col. 16, lines 5-6**), a plurality of access hubs (**see FIG. 2A, each CPE/PBX 52 that couples to each ports 56 at Fast Packet Switch 51; see col. 15, lines 55-58**), and an access network (**see FIG. 2A, a network between each CPE/PBX 52 and fast-packet switches 51**), said service manager including a policy server entity (**see FIG. 2B, a combined system** of **Connection Management Software 30, Connection Management Processor 64, BIN SCP 285),** a call processing entity (**see FIG. 2A, Call processing software 31**), a bandwidth management processing entity (**see FIG. 2A, a combined system** of **Connection Management Software 30, Connection Management Processor 64, BIN SCP 285**) and a data store (**see FIG. 2A, the combined system of Billing Data 65, RAO 67, and BIN SCP Disks 286, 288 of FIG. 6D**), said method comprising the steps of:

storing in the data store bandwidth management policies (**see col. 10, lines 29-45; note that bandwidth, billing and authentication procedures/policies must be stored in order to perform signaling**) as defined by a subscriber for the plurality of access hubs and the line numbers assigned to that subscriber (**see FIG. 7A, steps 222, 226, 228, 229, and 230; see col. 12, lines 34-52, 57-66; note that by determining the authentication and billing of each connection request, it is clear that the combined system of storage/billing must store the bandwidth/billing/authentication policies/procedures defined/provided**

by each calling/called customer/subscriber for each CPE/PBX, and the called/calling number/address assigned to each calling/called customer/subscriber);

detecting a mid-call event at one access hub (**see col. 12, lines 15-19; FIG. 7A, step 212; see FIG. 5A; see col. 12, lines 9-14; note that upon identifying/detection a mid-call event/request at the CPE/PBX 52 and the fast-packet switch 51, a signaling cell for attempting/requesting a call/connection is identified/received by the SCP**);

communicating from the one access hub to the service manager an indication that the mid-call event was detected (**see FIG. 2A, CPE/PBX 52 communicating with the combined system of connection management processor 64 and BIN SCP 61; see col. 9, lines 31-36, 54-65; note that upon detecting/identifying the mid-call event/request, CPE/PBX 52 communicates the request/event indication with the combined system by utilizing the signaling cells**);

performing policy processing in the bandwidth management processing entity of the service manager (**see col. 7, lines 60-66; see col. 8, lines 34-43; col. 9, lines 19-24; note that the connection management processor contains the connection table which performs the bandwidth/connection management by establishing ATM VP/VC according to the payload/service type of the request**).

Robrock'884 does not explicitly disclose determining, in the call processing entity, a bandwidth utilization required to support the mid-call event at the one access hub and whether the required bandwidth utilization exceeds a maximum bandwidth defined by the subscriber and stored in the data store of the service manager; and if such determination

indicates that the required bandwidth exceeds the maximum bandwidth defined by the subscriber and stored in the data store.

However, the above-mentioned claimed limitations are taught by Graham'722. In particular, Graham'722 teaches a packet data network **(see FIG. 1B, ATM network 120)** including a service manager of a network provider **(see FIG. 1B, Centralized Control Module 16 of the ATM network provider)**, an access network **(see FIG. 1B, Customer Networks 110)**, said service manager including a policy server entity **(see FIG. 1B, Centralized Call Admission Control Usage Monitor 145)**, a call processing entity **(see FIG. 1B, Call Control 140)**, a bandwidth management processing entity **(see FIG. 1B, the combined system of Centralized call admission control/usage monitor and Bandwidth Manager 150)** and a data store **(see FIG. 1B, Bandwidth Manager 150)**, and the method comprising:

storing in the data store bandwidth management policies as defined by a subscriber **(see FIG. 2, the combined system of Centralized call admission control/usage monitor 145 and Bandwidth Manager 150 stores the bandwidth management policies/contracts as defined/contracted by the client; see col. 7, lines 29-40)**;

identifying a mid-call event at one access hub **(see FIG. 8, a request; note that upon identifying/detection a call/connection attempt/request from the client A at Customer network 110I and ATM switch, VPN client request attempting/requesting a connection is identified/received by the CAC; see col. 7, lines 53-60)**

if policy-based bandwidth management is supported by the subscriber, retrieving bandwidth management policies associated with the subscriber and the service provider from

the data store in the service manager **(see FIG. 4A-4D; see col. 7, lines 53-60, see col. 9, lines 45 to col. 10, lines 67; note that in order to communicate and utilizes ATM, the client must support contract/policy-base bandwidth management. As indicated in Table 1-2, in order to set-up/negotiate a new connection for a particular client, the contract/policies associated with each client must be retrieved from the stored the stored contracted data from the bandwidth manager);**

determining, in the call processing entity, a bandwidth utilization required to support the mid-call event at the one access hub and whether the required bandwidth utilization exceeds a maximum bandwidth defined by the subscriber and stored in the data store of the service manager **(see FIG. 8, CAC checks client's total bandwidth utilizing, and determines whether the total bandwidth is complaint/exceed a maximum/contracted bandwidth defined by the client and the stored contracted data with respective to a client; see col. 7, lines 55-65)**; and

if such determination indicates that the requested bandwidth utilization exceeds the maximum bandwidth defined by the subscriber and stored in the data store **(see FIG. 8, CAC determines that the additionally requested bandwidth is <u>not</u> compliant (i.e. compliant? NO) with the contract (i.e. exceeds the maximum bandwidth allotted) for that particular client and the stored contracted data with respective to a client; see col. 7, lines 55-65);**

performing policy processing in the bandwidth management processing entity of the service manager **(see FIG. 8, CAC performs the policy/contract processing by either rejection the additional bandwidth request when the system is overload (i.e. overload?**

YES), or accepted by borrowing the additional bandwidth as over-reserved bandwidth (i.e. overload? No); see col. 7, lines 65 to col. 8, lines 5).

In view of this, having the system of Robrock'884 and then given the teaching of Graham'722, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Robrock'884, for the purpose of providing the CAC bandwidth management and control mechanism to allocate the extra bandwidth request, as taught by Graham'722, since Graham'722 states the advantages/benefits at col. 4, line 1-45 that such modification would enable a multitude of clients to "lease/borrow" additional capacity/bandwidth as needed basics in addition to contracted/maximum bandwidth while ensuring exiting capacity to be used to the fullest extent possible. The motivation being that by utilizing ATM CAC mechanism of borrowing the extra bandwidth, it can increase the flexibility of the bandwidth allocation processed while satisfying the customer needs since the client can now utilize the extra/spare/unused bandwidth.

Neither Robrock'884 nor Graham'722 explicitly discloses determining whether policy-based bandwidth management is supported for the subscriber (**per well established teaching in art, in order perform policy/contract-base bandwidth management, one skill in ordinary art must determine/verify whether the policy/contract-base bandwidth management is supported by the customer, and the customer must be ready to accept/support the policy/contract before establishing the connection**).

However, the above-mentioned claimed limitations are taught by well-established teaching in art. In view of this, having the combined system of Robrock'884 and Graham'722, then given the teaching of well established teaching in art, it would have been obvious to one

having ordinary skill in the art the time the invention was made to modify the combined system of Robrock'884 and Graham'722, for the purpose of determining whether the customer supports the policy/contract-base management before establishing the connection, as taught by well established teaching in art. The motivation being that by verifying and determining whether the customer supports a contract/policy-based bandwidth management prior to establishing the connection, it can reduce the incompatibilities between two systems, and it can increase the customer satisfaction since the validation is performed before the providing the service to the customer.

3. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robrock'884, Graham'722 and well established teaching in art, as applied to claim 12 above, and further in view of Corwith (U.S. 6,259,778).

Regarding claim 13, the combined system of Robrock'884, Graham'722 and well established teaching in art discloses the mid-call event as set forth above in claim 12.

Neither Robrock'884 nor Graham'722 explicitly discloses a fax tone or modem tone detect event (**see Corwith'778, see col. 3, lines 40-45; note that PBX systems detects a modem tone in order to determine whether it is a voice call or data call**).

However, the above-mentioned claimed limitations are taught by Corwith'778. In view of this, having the combined system of Robrock'884, Graham'722 and well established teaching in art, then given the teaching of Corwith'778, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Robrock'884, Graham'722, and well established teaching in art, for the purpose of

providing a mechanism to detect modem tones at PBX, as taught by Corwith'778, since Corwith'778 states the advantages/benefits at col. 1, lines 60-64, and col. 2, lines 11-15 that it would provide a new way to recognize the types of call made by the customer and billing the customer accordingly to obtain new revenue. The motivation being that by detecting modem tone at PBX, it can increase the current revenue by billing the customer who makes the modem call for several lasting hours.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robrock'884, Graham'722 and well established teaching in art, as applied to claim 12 above, and further in view of Beyda (U.S. 5,995,607).

Regarding claim 14, the combined system of Robrock'884, Graham'722 and well established teaching in art discloses the mid-call event as set forth above in claim 12.

Neither Robrock'884 nor Graham'722 explicitly discloses a request to support conference mode (see Beyda'607, see col. 3, lines 26-40, see col. 5, lines 55-65; see FIG. 3, step 46-50; note that PBX receives a request for conference mode).

However, the above-mentioned claimed limitations are taught by Beyda'607. In view of this, having the combined system of Robrock'884, Graham'722 and well established teaching in art, then given the teaching of Beyda'607, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Robrock'884, Graham'722 and well established teaching in art, for the purpose of providing a PBX receiving a request for conference mode, as taught by Beyda'607, since Beyda'607 states the advantages/benefits at col. 2, lines 10-15 that it would provide selective routing of each call per the type of call and QoS of each call. The motivation being that by

determining the type of call and selectively routing the call, it can avoid establishing the connection, which does not satisfy the QoS requirement.

5. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shenoda'130 (U.S. 6,389,130) in view of Beckwith (U.S. 2002/0055995).

Regarding claim 18, Shenoda'130 discloses a system for managing bandwidth in a packet data network in response to policies defined by a plurality of subscribers (see FIG. 3, Telephone 310 and 370), the packet data network including a backbone packet network (see FIG. 3, ATM network 230), a public switched telephone network (see FIG. 2, PSTN 250), an access network (see FIG. 2, a network comprises Access Concentrators 240, LAN 244 and PBX 246; or FIG. 3, a network that couples to an access End office 320), and a plurality of subscriber networks (see FIG. 2, Local Area network 244 and PBX 246), said system comprising:

a plurality of access hubs (see FIG. 3, SSP 324) connected to the subscribers through the subscriber networks (**see FIG. 3, SSP 324 connects to the services subscribers (i.e. telephone 310 subscribers via PBX or computer service subscribers via LAN) via PBX and LAN, see FIG. 2); see col. 4, lines 26-44; see col. 5, lines 1-19**;

a network gateway (**see FIG. 3, Multipurpose Switch 328 or 364**) connected to the access network (**FIG. 3, a network that couples to an access End office 320**), telephone network (**see FIG. 2, PSTN 250 couples to ATM network 230, thus it is clear that PSTN must connect to the multi-service Switch in order to connect to ATM network**) and the backbone packet network (**see FIG. 3, ATM network 230); see col. 4, lines 37-52, see col. 5, lines 20-38**;

a service manager with policy-based bandwidth management capabilities (**FIG. 5, a combined system of Internetworking/trunk manager 500, Application 505; also note that the combined management system utilizes SCP 340 and STP 330/350 for signaling, see FIG. 3**) connected to the plurality of access hubs (**see FIG. 3, STP 330/350 is connected to access point node SSP 324/368**), the network gateway (**see FIG. 3, STP 330 is also connected to Multipurpose switch 328**), and the configuration and provisioning entity (**see FIG. 3, the combined system of Resources Manager 510, Call control Manager 515, Route Manager 520); see col. 5, lines 12-31; see col. 9, lines 5-22, 57-65;**

a configuration and provisioning entity connected to the plurality of subscribers (see **FIG. 5, the combined system of Resources Manager 510, Call control Manager 515, Route Manager 520**) and the service manager (**FIG. 5, a combined system of Internetworking/trunk manager 500, Application 505, Signaling and control Transport 540**), said configuration and provision entity receiving policy updates from subscribers (**see col. 9, lines 10-22; note that resources manager 510 provides CAC, system interface management and connection configuration management services. Thus, it is clear that it must receive and store current and updated policy/contract for each subscriber**).

an advanced intelligent network service control point connected (**see FIG. 5, Signaling and control Transport 540 or see FIG. 3, SCP, service control point 340 of the network**) to the service manager (**FIG. 5, a combined system of Internetworking/trunk manager 500, Application 505**), and a service management system (**FIG. 5, a combined system of Internetworking/trunk manager 500, Application 505**) connected to the advanced intelligent network service control point (**see FIG. 5, Signaling and control**

Transport 540 or see FIG. 3, SCP, service control point 340; see col. 8, lines 26-35, see col. 9, lines 30-37).

Shenoda'130 does not explicitly disclose said advanced intelligent network service control point **(see Beckwith'995 FIG. 4, SCPs 12)** communicating policy updates to the service manager **(see Beckwith'995 FIG. 3, Network Management tool box 114)**; and said service management system communicating policy updates to the advanced intelligent network **(see Beckwith'995 page 8, paragraph 72-79; note that the network management communicates with the SCP in order to adding/removing/modify/update the provisions/policies data)**.

However, the above-mentioned claimed limitations are taught by Beckwith'995. In view of this, having the system of Shenoda'130 and then given the teaching of Beckwith'995, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Shenoda'130, for the purpose of providing a network management which communicates with SCP regarding policies/provisions data, as taught by Beckwith'995, since Beckwith'995 states the advantages/benefits at page 8, paragraph 74 that it would enable the modify the network data objects 132 as needed. The motivation being that by modifying/updating/synchronizing the data between the network management system and SCP, it can reduce the erroneous data provision/policy mismatches between two systems.

Regarding claim 19, the combined system of Shenoda'130 and Beckwith'995 disclose wherein the configuration and provisioning entity communicating policy updates from the subscribers as described above in claim 18. Shenoda'130 further discloses wherein

the configuration and provisioning entity further includes a graphical user interface (see col. 7, lines 52-56; **the combined system of Resources Manager 510, Call control Manager 515, Route Manager 520 can be software components, thus, it is clear that they must be include a graphical user interface in order for one skill in ordinary art to operate**). Beckwith'995 discloses wherein the configuration and provisioning entity (**see FIG. 3, client adapter objects 80**), and further includes a graphical user interface (**see FIG. 3, client adaptor 86 which couples to Computer 66 or computer 72 utilizing GUI**), a web server interface (**see FIG. 3, a client adaptor 86 which couples to gateway server 70**), and a craft interface (**see FIG. 3, a client adaptor 86 which couples to a craft terminal 66**), said interfaces connected to a plurality of data communication terminals of the subscriber (**see FIG. 3, telephone 60, computer 66, web user computer 72**) via a data communication link for communicating policy updates from the subscribers (**see page 3-4, paragraph 32-36; note that each client has a capability to change/update/create the service policy/contract/provision by utilizing any of the client adaptor interfaces**).

However, the above-mentioned claimed limitations are taught by Beckwith'995. In view of this, having the system of Shenoda'130and then given the teaching of Beckwith'995, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Shenoda'130, for the same purpose as described above in claim 18.

Allowable Subject Matter

6. Claims 3-5, 9-11, and 15-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 703-605-1531. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on 703-308-7828. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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